

IN THE CLAIMS:

A complete listing of all the claims is now presented.

Claims 1 to 12. (Cancelled).

Claim 13. (Currently Amended).

A network for data transmission comprising a process control according to claim 22,

wherein connections between the terminals of a hub switch ~~(1, 1')~~ and/or relays of saved data to one of the terminals occur according to presettable priorities.

Claim 14. (Currently Amended).

A network for data transmission comprising a process control according to claim 22,

wherein at least one terminal on at least one hub switch ~~(1)~~ is connected as a programming input ~~(4)~~.

Claim 15. (Currently Amended).

A network for data transmission comprising a process control according to claim 22,

wherein the hub switches ~~(1, 1')~~ are linked and/or networked with one another via fiberoptic cable ~~(2)~~.

Claim 16. (Currently Amended).

A network for data transmission comprising a process control according to claim 22,

wherein the hub switches ~~(1, 1')~~ are at least partially linked and/or networked with one another via electrical data lines.

Claim 17. (Currently Amended).

A network for data transmission comprising a process control according to claim 22,

wherein alternatively to the hub switches ~~(1, 1')~~ and/or on a terminal of at least one hub switch ~~(1')~~, a bus system ~~(9)~~ is provided.

Claim 18. (Currently Amended).

A network for data transmission comprising a process control according to claim 17,

wherein the bus system ~~(9)~~ links together access control units ~~(11)~~ monitored by a transmission authority control ~~(12)~~, via which the bus ~~(10)~~ of the previously mentioned system ~~(9)~~ is connected with the assigned terminal of the hub switch ~~(1')~~ and/or with a central processing unit ~~(6)~~, with slave processors ~~(7)~~ and/or with a programming device ~~(4)~~, with the transmission authority control ~~(12)~~ exclusively switching the transmission authority of the access control units ~~(11)~~ cyclically and/or according to presettable priority.

Claim 19. (Currently Amended).

A network for data transmission comprising a process control according to claim 18,

wherein each bus system ~~(9)~~ has its own transmission authority control ~~(12)~~.

Claim 20. (Currently Amended).

A network for data transmission comprising a process control with modules ~~(3, 9)~~ linked for data exchange, according to claim 22,

wherein in said process control with several linked programmable controllers, each including a central processing unit ~~(6)~~ and several slave processors ~~(7)~~, at least one controller has its central processor ~~(6)~~ and slave processors ~~(7)~~ connected with one another and with the network via a bus system ~~(9)~~, which links access control units ~~(11)~~ monitored by a transmission authority control ~~(12)~~, via which the bus ~~(10)~~ of the bus system ~~(9)~~ is connected with the processors ~~(6, 7)~~ and/or with the network, with the transmission authority control ~~(12)~~ exclusively switching the transmission authority of the access control units ~~(11)~~ cyclically and/or according to presettable priority.

Claim 21. (Currently Amended).

A network for data transmission comprising a process control according to claim 18,

wherein the access control units ~~(11)~~ temporarily save transmission data of the assigned data modules until transmission authority is received.

Claim 22. (Currently Amended).

A network for data transmission comprising a process control having programmable controllers ~~(3)~~ respectively including a central processing unit ~~(6)~~ and slave processors ~~(7)~~ assigned to said central processing unit, and a network linking said controllers ~~(3)~~ for data transmission via hub switches ~~(1, 1*)~~ and/or busses provided with several terminals and assigned and/or integrated memory array;

said hub switches ~~(1, 1*)~~ connecting its terminals in pairs while disconnecting them from all other terminals and/or temporarily storing data packets forwarded via the terminals separately and forwarding them to the respectively addressed terminal only when said terminal is available and/or can be made available for data reception;

said busses linking together access control units ~~(11)~~ which are controlled by a transmission authority control ~~(12)~~ and via which the respective bus receives data from interface modules ~~(5)~~ linked to the busses;

said programmable controllers (3) being respectively assigned to one of said hub switches and/or busses;

said hub switch and/or bus having separate terminals for the central processing unit (6) and the slave processors (7) of the assigned controller (3), thereby enabling each slave processor of a respective controller (3) for exchanging data with an arbitrary controller or a module (5) thereof while circumventing its assigned central processor unit (6).